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- Fox, Mark A.
San Mateo, CA 94403 (US)
- Rossmann, Alain S.
Palo Alto, CA 94303 (US)
- Lentzner, Mark G.
Mountain View, CA 94041 (US)
- Laursen, Andrew L.
San Mateo, CA 94402 (US)
- Sandman, Brad E.
Sunnyvale, CA 94086 (US)

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(71) Applicant: Phone.Com Inc.
Redwood City, CA 94063 (US)

(72) Inventors:
• Schwartz, Bruce V.
San Mateo, CA 94402 (US)
• Greer, Russell S.
Los Gatos, CA 95030 (US)
• Boyle, Stephen S.
Fremont, CA 94539 (US)

(74) Representative: Ablett, Graham Keith et al
Ablett & Stebbing,
Caparo House,
101-103 Baker Street
London W1M 1FD (GB)

(54) Method and architecture for interactive two-way communication devices to interact with a network

(57) The present invention relates to navigation of the Internet by a two-way interactive communication mobile device capable of wireless communication, via a link server (300), with service providers or network servers on the Internet. After the mobile device has established a communication session with the link server over a wireless network (308), a control engine 320 in the link server is initiated and uses the computing resources of the link server device so as to be responsible for tasks that require considerable computing power and memory, such as processing of URL requests, interpretation of markup language files, management of data cache and variable states. Working with a message processor (315) in the server device, the control engine communicates with an interface engine in the mobile device using a compact data format that is efficiently transportable in the wireless data network. The interface engine typically performs tasks that do not require considerable computing power and memory, such as receiving input data from users, and the rendering of the compact data format received from the link server device, to cause the mobile device to display contents in the

markup language files on a display screen.

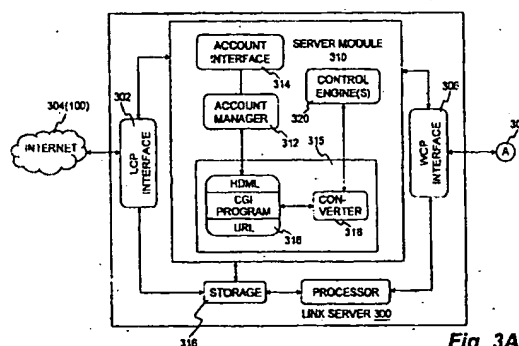


Fig. 3A



European Patent
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EUROPEAN SEARCH REPORT

Application Number
EP 99 30 7294

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	MEYER M ET AL: "THE ON-THE-MOVE CONCEPT FOR MOBILE MIDDLEWARE" ISS. WORLD TELECOMMUNICATIONS CONGRESS. (INTERNATIONAL SWITCHING SYMPOSIUM), CA, TORONTO, PINNACLE GROUP, 21 September 1997 (1997-09-21), pages 373-378, XP000704489	1-3,6,7, 9,10, 12-14	H04L29/06 H04Q7/32
Y	* abstract *	4,8,11	
A	* page 374, left-hand column, line 4 - page 377, left-hand column, line 11 *	5	
Y	WO 97 27546 A (EX MACHINA INC) 31 July 1997 (1997-07-31)	4,8,11	
A	* abstract * * page 1, line 10 - page 5, line 9 * * page 7, line 27 - page 15, line 16 * * page 17, line 17 - page 18, line 26 * * page 31, line 8-20 * * page 34, line 18 - page 35, line 4 * * page 36, line 20 - page 37, line 21 * * page 42, line 1 - page 50, line 9 * * figure 1 *	5	
X	US 5 727 159 A (KIKINIS DAN) 10 March 1998 (1998-03-10) * abstract * * column 1, line 1 - column 13, line 9 * * figures 1-5 *	1-3,6,7, 9,10, 12-14	H04L H04Q
The present search report has been drawn up for all claims.			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
Place of search THE HAGUE		Date of completion of the search 29 March 2001	Examiner Lievens, K
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background C : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons A : member of the same patent family, corresponding document	

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 99 30 7294

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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29-03-2001

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9727546 A	31-07-1997	AU 1754397 A	20-08-1997
		CA 2243555 A	31-07-1997
		CN 1217800 A	26-05-1999
		EP 0886826 A	30-12-1998
		US 6021433 A	01-02-2000
US 5727159 A	10-03-1998	CN 1218561 A	02-06-1999
		EP 0892947 A	27-01-1999
		JP 11508715 T	27-07-1999
		WO 9738389 A	16-10-1997
		US 6076109 A	13-06-2000

EPO FORM P0439

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82